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(54) Stackable pack

(57) A stackable pack 10 for storing a plurality of bathroom and toilet fittings comprises a base 11 made of rigid foamed plastics material and formed with recesses 12, 14, 17, 19, 21 arranged to hold lower portions of the fittings required to be stored, a lid 23 made of rigid foamed plastics material and formed with recesses arranged to hold upper portions of the fittings, and corner posts 24 the interposed the case 11 and lid 23 in order to provide rigidity to the pack. Once the articles are assembled between the base and lid, shrink wrap plastics film is then applied around the pack.

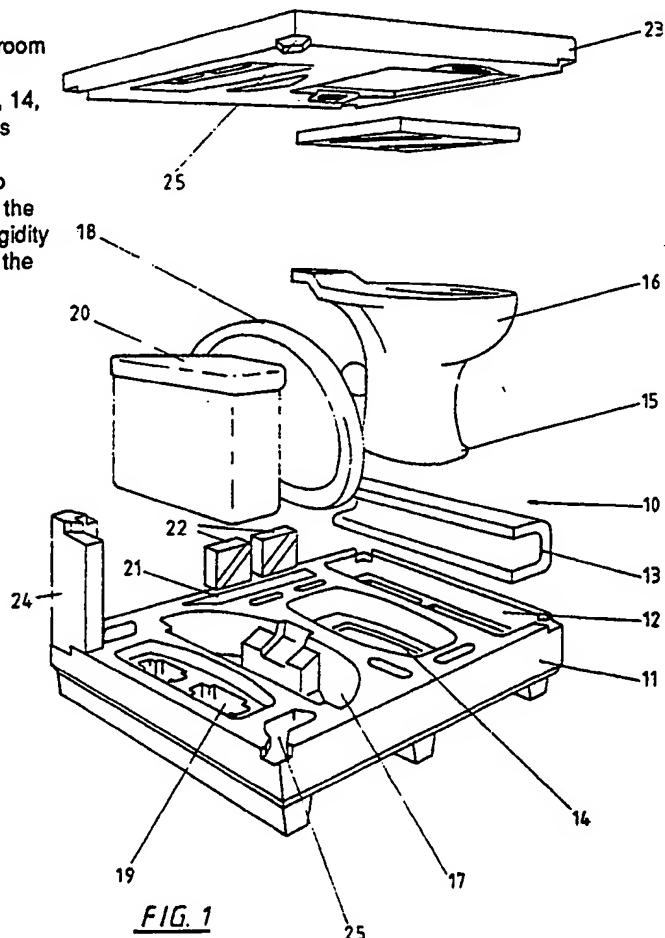


FIG. 1

1/2

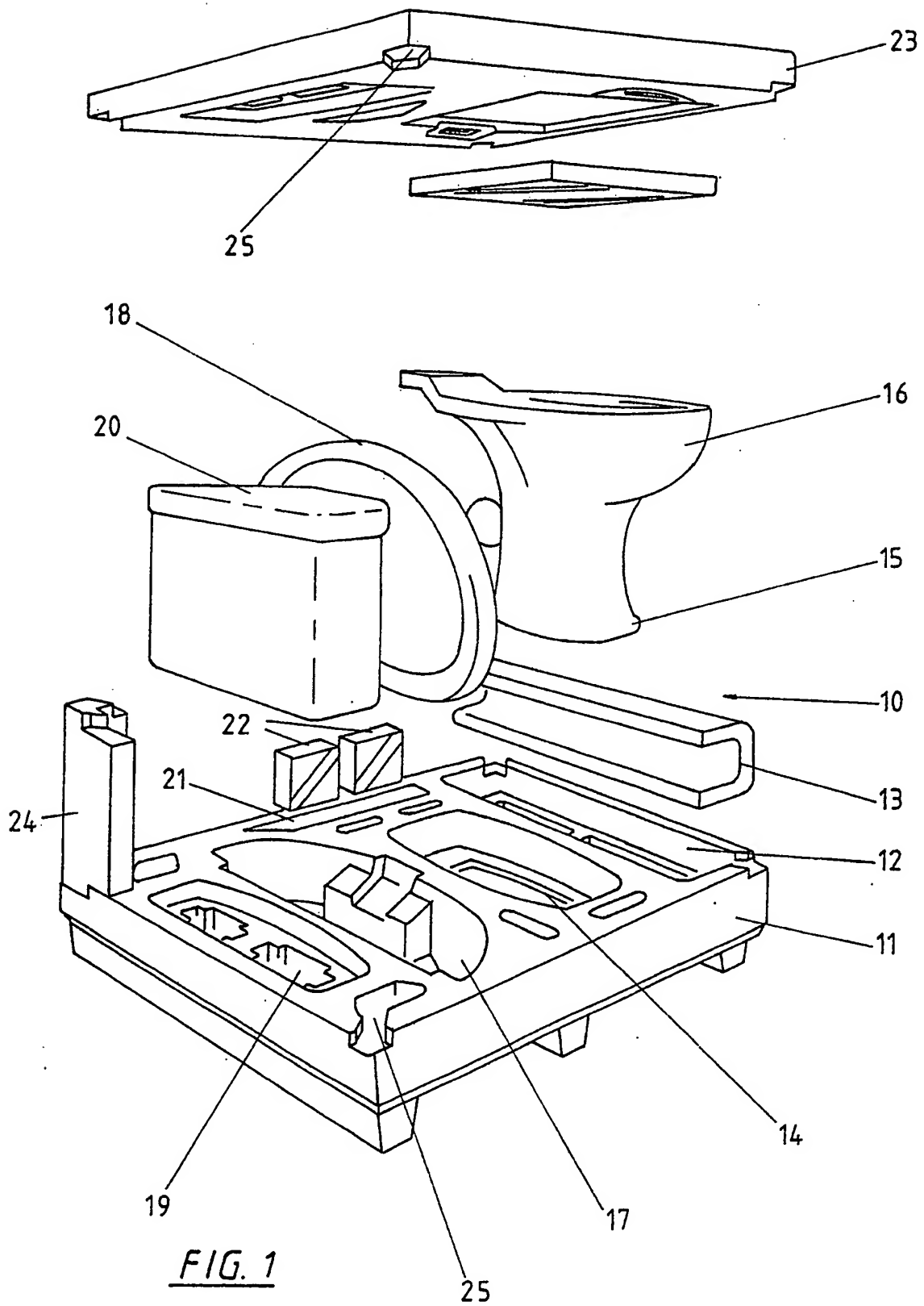


FIG. 1

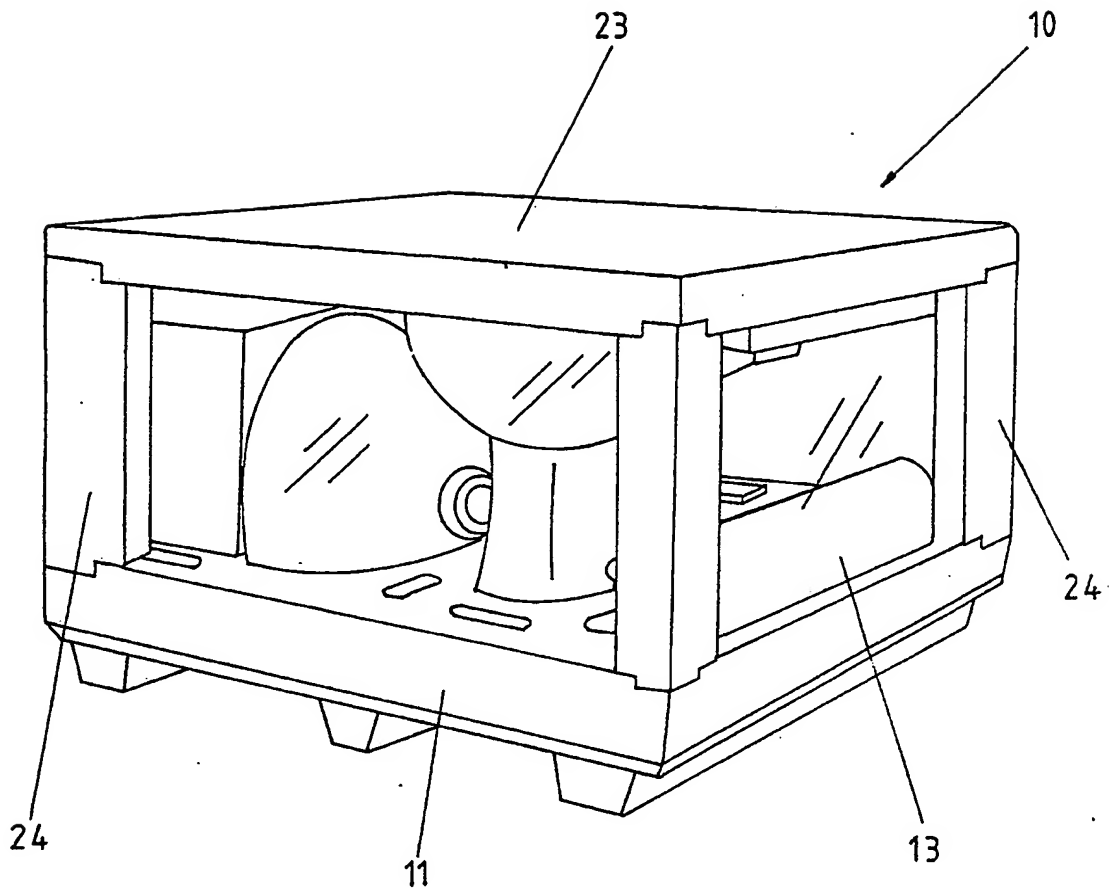


FIG. 2

STACKABLE PACK

This invention relates generally to a stackable pack which is capable of storing securely a number of individual articles in the pack for handling and transportation of the articles as a single package, and which pack also is capable of being formed into a stable stack of a number of similar packs.

The invention has been developed primarily, though not exclusively, in connection with the storage of relatively bulky and also heavy articles, such as wash basins, pedestals, toilet bowls, toilet cisterns and toilet seats. When some of these articles are made of ceramic material, they are heavy and also relatively brittle, and therefore reliable and secure storage in any packaging used to transport the articles from the factory to the customer must be sufficiently robust to withstand any rough handling in transit.

Until fairly recently, it has been the practice to package each of these articles in its own pack, which has usually been made of strengthened cardboard, or fabricated into box shape from wooden strips. The assembly of wooden boxes is an appreciable on-cost, whereas the use of cardboard involves handling and storage problems, especially if the package becomes exposed to rain or damp as the cardboard material deteriorates very rapidly on exposure to water. It is therefore impossible to store cardboard packages out in the open, unless the entire package is enclosed by waterproof packaging material.

However, even if protected from the weather by weatherproof packing material, cardboard will tend to crumple over a period of time by virtue of the heavy weight of the articles in the pack. This can make it dangerous to form a stack of cardboard packs, as individual packs in a particular stack are liable to tilt or wobble as the cardboard packing crumples at any particular region of the

pack.

The invention therefore seeks to provide an improved form of pack in which bulky items can be securely stored during handling and transport of the pack; which does not involve the use of cardboard or wood to form the main load bearing structure of the pack; and which preferably is capable of being stored out of doors if required for extended periods without appreciable deterioration of the pack or ingress of damp to the interior of the pack.

According to the invention there is provided a stackable pack which is capable of storing securely a number of individual articles in the pack for handling and transportation of the articles as a single package and comprising:

a base made of rigid foamed plastics material and formed with recesses arranged to hold lower portions of the articles which require to be stored;

a lid made of rigid foamed plastics material and formed with recesses arranged to hold upper portions of said articles; and

corner posts for interconnecting the base and the lid in order to provide rigidity to the pack.

Thus, a pack according to the invention can hold securely and reliably any required articles, by virtue of the engagement of the upper and lower portions of the articles in the recesses in the lid and base, and the articles themselves provide rigidity to the pack by transmitting load between the lid and base through the articles. In addition, corner rigidity of the pack is provided by the corner posts, so that the pack, when assembled with articles, forms a rigid package which can be readily handled, transported and stacked.

The corner posts are particularly useful in facilitating stacking of the pack, and also provide protection of the articles e.g. in the event of a side impact from a fork lift truck.

To provide further rigidity to the pack, and also weather protection so that the pack can be stored outside, it is preferred that strong plastics film wrapping is applied around the assembled pack. Conveniently, this takes the form of "shrink wrap" plastics material.

The corner posts are preferably made of the same material as the base and the lid, though other materials may be used.

Conveniently, the corner posts are formed as separate components which can be assembled with the lid and base after loading of the pack with articles to be stored. However, it is within the scope of the invention for at least one of the posts to be formed as an integral part of the base or the lid.

When the corner posts are formed as separate components, preferably seatings are moulded at the corners of the lid and base, so that the posts can be fitted securely in position and, upon subsequent application of a shrink wrap plastics film, the lid, base and posts (and also the articles stored in the pack) are pressed firmly into co-operative engagement with each other to provide an easily handled and reliably stored pack of articles.

When a pack according to the invention is used for storing bathroom and / or toilet fittings, such as wash basins, pedestals, toilet bowls and toilet cisterns, an entire suite of articles can be provided in a single pack. Conveniently, accessory items, such as tap fittings can also be readily stored in the pack by being accommodated in a specially formed recess in the base.

One embodiment of stackable pack according to the invention will now be described in detail, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is an exploded view of the component parts of a stackable pack according to the invention, which is illustrated, by way of example only, as being capable of

storing a suite of bathroom ware; and.

Figure 2 is a perspective illustration of the pack in assembled form with the suite of articles stored therein.

Referring now to the drawings, a stackable pack according to the invention is designated generally by reference 10 and is capable of storing securely a number of individual articles in the pack for handling and transportation of the articles as a single package. The pack 10 comprises a base 11 made of any suitable rigid foamed plastics material, and which is formed with recesses which are arranged to hold lower portions of the articles which are required to be stored. By way of example only, elongate recess 12 in the base 11 serves to receive and hold captive a horizontally arranged wash basin pedestal 13, recess 14 receives and holds captive the base 15 of a toilet bowl 16, recess 17 receives and holds captive a lower portion of a wash basin 18 and recess 19 receives and holds captive a lower portion of a toilet cistern 20. In addition, recess 21 receives and holds captive accessory items, such as boxes of taps 22.

The pack 10 also comprises a lid 23 which is also made of rigid foamed plastics material, and is formed with recesses which correspond with the recesses 12, 14, 17 and 19 in the base 11, and serve to hold the upper portions of the articles which are to be stored.

Corner posts 24 are provided which serve to interconnect the base 11 and the lid 23 in order to provide rigidity for the pack 10. In fact, upon assembly of the pack to the form shown in Figure 2, and with subsequent application of shrink-wrap plastics film around the entire exterior of the pack, a rigid structure is provided which can be readily handled, transported and stored in a stack, both inside or outside as required. Load can be transmitted between the lid 23 and the base 11 through the articles themselves, and additional rigidity is provided by the corner posts 24. The corner posts are particularly

useful in facilitating safe stacking of a number of packs, and also provide protection of the articles stored therein against side impact.

In the illustrated embodiment, the corner posts 24 are made of the same foamed plastics material as the base 11 and lid 13, though other materials may be used. The corner posts 24 are formed as separate components which can be assembled with the lid 23 and the base 11 after loading of the pack with the articles to be stored. Seatings 25 are provided at the corners of the base 11 and lid 23, into which the ends of the posts 24 can be press fitted, and upon the subsequent application of a shrink-wrap plastics film, the lid 23, the base 11 and the posts 24 (and also the articles stored in the pack) are pressed firmly into co-operative engagement with each other to provide an easily handled and reliably stored pack of articles.

While the corner posts 24 have been described and illustrated as separately formed components, the lid 23 and / or the base 11 may each be provided with at least one post formed as an integral part thereof. Thus, by way of example only, all four posts 24 may be formed integrally with the slab forming the base or the lid, then upon assembly the free ends of the posts can be press fitted into suitable seatings provided in the other slab part of the pack.

By providing a pack structure as shown in the drawings, corner rigidity is provided for the pack, while the contents of the pack can be readily viewed through the side wall spaces defined between each post when transparent shrink wrapped film is applied around the pack, so that the contents of the pack can be readily determined e.g. to check the particular colour of suite of articles in the pack.

CLAIMS

1. A stackable pack which is capable of storing securely a number of individual articles in the pack for handling and transportation of the articles as a single package and comprising:

a base made of rigid foamed plastics material and formed with recesses arranged to hold lower portions of the articles which require to be stored;

a lid made of rigid foamed plastics material and formed with recesses arranged to hold upper portions of said articles; and,

corner posts for interconnecting the base and the lid in order to provide rigidity to the pack.

2. A pack according to Claim 1 and having a plurality of articles stored therein, in which plastics film wrapping is applied around the pack.

3. A pack according to Claim 2, in which the plastics film wrapping comprises shrink-wrap plastics material.

4. A pack according to any one of Claims 1 to 3, in which the corner posts are made of the same material as the base and the lid.

5. A pack according to any one of the preceding claims, in which the corner posts are formed as separate components which can be assembled with the lid and base after loading of the pack with articles to be stored.

6. A pack according to any one of Claims 1 to 4, in which at least one of the corner posts is formed as an integral part of the base or the lid.

7. A pack according to Claim 5, in which seatings are moulded at the corners of the lid and base, so that the posts can be fitted securely in position and, upon subsequent application of a shrink wrap plastics film, the lid, base and posts (and also the articles stored in the pack) are pressed firmly into co-operative engagement with each other to provide an easily handled and reliably stored

pack of articles.

8. A pack according to any one of the preceding claims and storing bathroom and / or toilet fittings therein, and accessory items, such as tap fittings, also being accommodated in a specially formed recess in the base.

9. A pack according to Claim 1 and substantially as hereinbefore described with reference to, and as shown in the accompanying drawings.